UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,296	08/14/2006	Peter Schramm	253561	6942

23460 7590 09/14/2009

LEYDIG VOIT & MAYER, LTD
TWO PRUDENTIAL PLAZA, SUITE 4900
180 NORTH STETSON AVENUE
CHICAGO, IL 60601-6731

EXAMINER	
RAMOS, JAVIER J	
ART UNIT	PAPER NUMBER
2625	

NOTIFICATION DATE	DELIVERY MODE
09/14/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Chgpatent@leydig.com
Chgpatent1@leydig.com

Office Action Summary	Application No.	Applicant(s)	
	10/589,296	SCHRAMM, PETER	
	Examiner	Art Unit	
	JAVIER J. RAMOS	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the Appellant's Appeal Brief filed on 5/4/09, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Mark K Zimmerman/

Supervisory Patent Examiner, Art Unit 2625.

2. Claims 8-14 are pending in this application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 8-10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brunner (US 5,031,534) in view of Van de Capelle et al. (US. 2004/0136015 A1).

5. In regards to claim 8, Brunner teaches a method for color correction in printing machines **(Col. 1, Lines 9-21, description of the general correction method)**, comprising: (a) executing separately one after the other for individual process colors involved in an autotype combination printing **(Col. 2, Lines 12-25, Lines 51-57, running again, one or more times, through the above-described process steps for every printing ink; Col. 5, Lines 38-60, test patches of single ink colors are measured by a densitometer and therefore each ink is measured independently from the other inks)**; changing only the color supply of a single process color **(Col. 5, Lines 38-60, test patches of single ink colors; Col. 4, Lines 33 to Col. 5, Line 16, color patches contain different gradation levels (the supply of each individual color is adjusted per gradation for the individual color's color patches), therefore for a given set of color patches only a single color supply is adjusted)** determining the effect of the change in the color supply of this one process color on color values of a color spot to be measured **(Col. 4, Lines 33 to Col. 5, Line 16, specifically "it is therefore possible to conclude what effect the amount of ink set by any adjuster produces in printing or what variations are produced with respect to the surface**

coverage of the screen dots when a change is made in the setting of the corresponding adjuster 37"; Col. 5, Lines 38-60, densitometers are used to measure patches of each individual color); storing a corresponding color spot for this color **(Col. 8, Line 65 to Col. 9, Line 29, memory elements (data storage means) are used to store color data (of color patches) captured by the color density measuring system 45, 50 and 51)**.

It is noted, however, that Brunner does not specifically teach (b) balancing all of the measurement values determined and stored in step (a) with each other so that for further color correction, a few or all of the process colors involved in the printing can be adjusted simultaneously.

In analogous art, Van de Capelle et al. (hereafter VDC) teaches (b) balancing all of the measurement values determined and stored in step (a) with each other **(Fig. 4, the method shown balances colors from measured printed patches in order to make the output of the system close to a desired output)** so that for further color correction, a few or all of the process colors involved in the printing can be adjusted simultaneously **([0035]-[0037], corrections are determined through multiple iterations of the method and then applied to the CMY channels)**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Brunner by balancing measured color patch values that are stored in a system with each other, as taught by VDC, in order to enhance the print engine stability, color balance quality and contouring of a printing system **(VDC: [0001])**.

6. In regards to claim 9, VDC teaches during the printing at least one color spot is measured **(Fig. 4, Step 68, measure printed patches)**, wherein for this measurement at least one actual chromaticity position is determined **(Fig. 4, Step 68, determine CIE L*a*b* values of measured printed patches)**, and that the actual chromaticity position or each actual chromaticity position is compared with a corresponding desired chromaticity position **(Fig. 4, Step 70, determine differences between desired and measured CIE L*a*b* values)**, wherein the color correction is performed when the actual chromaticity position deviates from the corresponding desired chromaticity position **(Fig. 4, Step 78, color correction only is performed if the initial determination of "close to desired output" is a NO in the first run of the method)**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Brunner by performing color correction of output colors when a measured color value deviates from a desired color value, as taught by VDC, in order to enhance image quality by increasing the quality of output color balance through utilization of control calibration **(VDC: [0001])**.

7. In regards to claim 10, Brunner teaches control waits in step a) until a balanced state has been reached after a color supply of the corresponding color to be printed has been changed **(Col. 2, Lines 12-25, the operator must wait for several hundred impressions until the new ink feed has stabilized)**.

8. In regards to claim 12, Brunner teaches in step (a), for each process color to be printed, the effect of the isolated change in a color supply of each process color on the chromaticity position of the color spot to be measured, is measured separately one after the other in time **(Col. 2, Lines 51-57, "running again, one or more times, through the above-described process steps for every printing ink and color area involved")**.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brunner (US 5,031,534) in view of Van de Capelle et al. (US. 2004/0136015 A1), as applied to claim 8, further in view of Fujimori (US 6,181,892 B1).

10. In regards to claim 11, Brunner, as modified by Van de Capelle et al. (hereafter VDC), teaches a method according to claim 8 and determining the measurement values of the chromaticity position or each chromaticity position in step a) **(VDC: Fig. 4, Step 68, determine CIE L*a*b* values of measured printed patches)**.

However, Brunner, as modified by VDC, does not specifically teach at least one value is measured after a certain time period or at certain time intervals and control locks the changing balanced state through extrapolation.

On the other hand, Fujimori teaches at least one value is measured after a certain time period or at certain time intervals and control locks the changing balanced state through extrapolation **(Figs. 2A-2B, 4)**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Brunner, as modified by VDC, by incorporating the time shifted measurement method of Fujimori into the color correction method of Brunner, as modified by VDC, to yield the predictable result of increasing the long term accuracy of the color measurements due to a more stable state being reached between measurement times.

11. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brunner (US 5,031,534) in view of Van de Capelle et al. (US. 2004/0136015 A1), as applied to claim 8, further in view of Dolezalek et al. (US 4,901,254).

12. In regards to claim 13, Brunner, as modified by Van de Capelle et al. (hereafter VDC), teaches it is determined how the corresponding chromaticity position shifts when changing the color supply of each process color **(VDC: Fig. 4, Steps 68-78, by measuring the adjusted patches each time they print and comparing them to the desired output, color shift can be observed, specifically whether the color is closer or farther from the desired color between various iterations of the correction process)**.

It is noted however, that Brunner, as modified by VDC, does not specifically teach the magnitude and direction of a color vector are determined from the chromaticity positions before the color change and after the color change.

In analogous art, Dolezalek et al. (hereafter Dolezalek) teaches the magnitude and direction of a color vector are determined from the chromaticity positions before the color change and after the color change **(Fig. 8, the points A'-F' are measured which compare the difference between the measured value and the theoretical value, once corrected the color vectors will coincide with the theoretical value for the changed color point)**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Brunner, as modified by VDC, by determining the magnitude and direction of color vectors, as taught by Dolezalek, in order to reduce the time it takes to influence the color appearance of an image by using vector operations **(Dolezalek: Abstract)**.

13. In regards to claim 14, Brunner, as modified by VDC, teaches the determined and stored measurement values according to step (b) **(VDC: Fig. 4, Step 68, measured print patches)**.

It is noted however, that Brunner, as modified by VDC, does not specifically teach that measurement values are balanced through vector operations.

In analogous art, Dolezalek teaches that measurement values are balanced through vector operations **(Figs. 3-9; Abstract; Col. 7, Line 42 to Col. 8, Line 55, measurements are taken of produced colors in a printing process and are modeled as vectors showing the difference between the actual and intended**

results leading to using scaling factors on the produced colors; Col. 11, Lines 13-20).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Brunner, as modified by VDC, by balancing measurement values through vector operations, as taught by Dolezalek, in order to reduce the time it takes to influence the color appearance of an image **(Dolezalek: Abstract)**.

Response to Arguments

14. Applicant's arguments with respect to claims 8-14 have been considered but are moot in view of the new ground(s) of rejection.

15. In regards to the arguments by the Applicant on page 5 of the Appellant's Appeal Brief, the Examiner notes that the combination of Brunner, as modified by Soler et al., no longer exists. Brunner is still relied upon as a primary reference, but as can be seen, the scope of the rejections has been changed. Brunner has been utilized in a new manner, in combination with a new secondary reference, therefore prompting the Non-Final status of this office action in response to the appeal brief dated 5/4/09. As such, in regards to the Applicant's arguments that Brunner does not specifically teach "changing only the color supply of a single process color," "separately one after the other for individual process colors" and "determining the effect of the change in the color supply of this one process color on color values of a color spot to be measured," please see the new grounds of rejection stated in regards to the rejection to claim 8 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAVIER J. RAMOS whose telephone number is (571) 270-3947. The examiner can normally be reached on Monday to Thursday - 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark K. Zimmerman can be reached on (571) 272-7653. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Javier J Ramos/
Examiner, Art Unit 2625

/Mark K Zimmerman/

Supervisory Patent Examiner, Art Unit 2625